IN THE CLAIMS:

1.   (Previously Presented) A reception apparatus which receives and reproduces scrambled content, comprising:

    reception means for receiving the scrambled content, wherein the scrambled content is scrambled so that a predetermined unit of scrambled content, which is a portion of the scrambled content, is descrambled using a descrambling key corresponding to the predetermined unit of scrambled content, and at least one piece of storage information in which a list of descrambling keys including all descrambling keys to be used for descrambling the scrambled content and descrambling key identifiers that identify the descrambling keys respectively and are used to identify a descrambling key corresponding to the predetermined unit of scrambled content in both a normal reproduction mode that includes a play mode, and a particular reproduction mode that includes a fast-forward mode is embedded,

    from the list of descrambling keys, a first group of descrambling keys being extracted in the normal reproduction mode, and a second group of descrambling keys being extracted in the particular reproduction mode;

    storage means for storing the received scrambled content and the storage information;

    list extraction means for extracting the list of descrambling keys from the stored storage information;

    descramble processing means for (a) extracting the predetermined unit of scrambled content from the stored scrambled content sequentially if in the normal reproduction mode to_obtain a first group of scrambled content made of a plurality of portions of the

22   scrambled content, or to obtain a second group of scramble content made of a plurality of

23   portions of the scrambled content in an order different from the normal reproduction mode if in

24   the particular reproduction mode (b) i) in the normal reproduction mode, specifying and

25   extracting, using the descrambling key identifiers, the first group of descrambling keys and

26   descrambling each portion of the scrambled content in the first group of scrambled content with

27   use of a corresponding one of the first group of descrambling keys thereby obtaining a first group

28   of content made of a plurality of portions of content, and ii) in the particular reproduction mode,

29   specifying and extracting, using the descrambling key identifiers, the second group of

30   descrambling keys and descrambling each portion of the scramble content in the second group of

31   scrambled content with use of a corresponding one of the second group of descrambling keys

32   thereby obtaining a second group of content made of a plurality of portions of content; and

33   reproduction means for reproducing the first group of content in the normal

34   reproduction mode and reproducing the second group of content in the particular reproduction

35   mode.

1   2.   (Previously Presented) The reception apparatus of Claim 1, wherein

2   the reception means receives one piece of storage information in which the list of

3   descrambling keys is embedded,

4   the storage means stores the received scrambled content and the one piece of

5   storage information, and

6   the list extraction means extracts the list of descrambling keys from the stored one

7   piece of storage information.

1   3.   (Previously Presented) The reception apparatus of Claim 1, wherein

2   the reception means receives a plurality of pieces of storage information in each

3   piece of which a divided portion of the list of descrambling keys is embedded,

4   the storage means stores the received scrambled content and the plurality of

5   pieces of storage information, and

6   the list extraction means extracts the list of descrambling keys from the stored

7   plurality of pieces of storage information.

1   4.   (Previously Presented) The reception apparatus of Claim 1, wherein

2   the reception means sequentially receives a transport stream (TS) packet including

3   the predetermined unit of scrambled content,

4   the storage means sequentially stores the received TS packet, wherein

5   the descramble processing means includes:

6   scrambled content extraction means for extracting the predetermined unit of

7   scrambled content from one of the TS packets stored in the storage means, and counting the

8   ordinal position of the TS packet from the leading TS packet;

9   descrambling key extraction means for extracting a descrambling key from the list

10 of descrambling keys, based on the counted ordinal position; and

11   descrambling means for descrambling the extracted predetermined unit of

12 scrambled content using the extracted descrambling key.

5.   (Previously Presented) The reception apparatus of Claim 1, wherein

the reception means receives at least one storage Entitlement Control Message (ECM) as the at least one piece of storage information, the list of descrambling keys being embedded in a portion to be encoded in the main body of the ECM,

the storage means stores the received storage ECMs, and

the list extraction means interprets the stored storage ECMs to extract the list of descrambling keys.

6.   (Original) The reception apparatus of Claim 5, wherein

the reception means receives the storage ECMs including identifying information for distinguishing the storage ECMs from another type of ECM.

7.   (Original) The reception apparatus of Claim 5, wherein

the reception means receives the storage ECMs at a time.

8.   (Previously Presented) The reception apparatus of Claim 1, wherein

the reception means sequentially receives a TS packet including (a) the predetermined unit of scrambled content and (b) packet specifying information for specifying an unscrambled TS packet, and

the storage means sequentially stores the received TS packet, wherein

the descramble processing means includes:

scrambled content extraction means for extracting the predetermined unit of scrambled content and the packet specifying information from one of the TS packets stored in the storage means;

10   descrambling key extraction means for extracting a descrambling key from the list

11   of descrambling keys, based on the extracted packet specifying information; and

12   descrambling means for descrambling the extracted predetermined unit of

13   scrambled content using the extracted descrambling key.

1   9.   (Previously Presented) The reception apparatus of Claim 8, wherein

2   the packet specifying information is one of Continuity Counter (CC), the number

3   of TS packets, a cumulative amount of data, a relative reproduction time, and a scrambling key

4   identifier,

5   the scrambled content extraction means extracts, as the packet specifying

6   information, one of the Continuity Counter (CC), the number of TS packets, the cumulative

7   amount of data, the relative reproduction time, and the scrambling key identifier, and

8   the descrambling key extraction means performs a predetermined operation to the

9   extracted information as the packet identifying information to generate a descrambling key

10   identifier, and extracts a descrambling key from the list of descrambling keys based on the

11   descrambling key identifier.

1   10.   (Previously Presented) The reception apparatus of Claim 1, wherein

2   the reception means sequentially receives a TS packet including (a) the

3   predetermined unit of scrambled content and (b) unscrambled I picture information, wherein the

4   I picture information indicates whether the TS packet corresponding to the information consists

5   of a portion of an I picture/an I picture or not, and

6   the storage means sequentially stores the received TS packet, wherein

7   the descramble processing means includes:

8   scrambled content extraction means for, when performing particular reproduction

9   processes, extracting the predetermined unit of scrambled content and I picture information from

10   one of the TS packets stored in the storage means;

11   I picture judgment means for judging whether the extracted predetermined unit of

12   scrambled content consists of a portion of an I picture/an I picture or not, based on the extracted I

13   picture information;

14   descrambling key extraction means for extracting a descrambling key from the list

15   of descrambling keys, only when the extracted predetermined unit of scrambled content consists

16   of a portion of an I picture/an I picture; and

17   descrambling means for descrambling the extracted predetermined unit of

18   scrambled content using the extracted descrambling key.

1   11.   (Previously Presented) The reception apparatus of Claim 1 further managing

2   contract information and consisting of a security module whose portion does not effectively

3   function if a contract has not been made, and other modules, the reception apparatus further

4   comprising:

5   list holding means for holding the list of descrambling keys extracted by the list

6   extraction means,

7   wherein the list extraction means and the list holding means are provided within

8   the security module.

1   12.   (Previously Presented) A reception apparatus which receives and reproduces

2   scrambled content, comprising:

3   reception means for receiving the scrambled content, wherein the scrambled

4   content is scrambled so that a predetermined unit of scrambled content, which is a portion of the

5   scrambled content, is descrambled using a descrambling key corresponding to the predetermined

6   unit of scrambled content, and a descrambling key is attached to each predetermined unit of

7   scrambled content;

8   storage means for storing the received scrambled content;

9   list generation means for, when/after storing the received scrambled content by

10   the storage means, generating a list of descrambling keys including all descrambling keys to be

11   used for descrambling the scrambled content and descrambling key identifiers that identify the

12   descrambling keys respectively and are used to identify a descrambling key corresponding to the

13   predetermined unit of scrambled content in both a normal reproduction mode that includes a play

14   mode, and a particular reproduction mode that includes a fast-forward mode, based on the

15   descrambling key attached to each predetermined unit of scrambled content,

16   from the list of descrambling keys, a first group of descrambling keys being

17   extracted in the normal reproduction mode, and a second group of descrambling keys being

18   extracted in the particular reproduction mode;

19   descramble processing means for (a) extracting the predetermined unit of

20   scrambled content from the stored scrambled content sequentially if in the normal reproduction

21   mode to obtain a first group of scrambled content made of a plurality of portions of the

22   scrambled content, or to obtain a second group of scramble content made of a plurality of

23   portions of the scrambled content in an order different from the normal reproduction mode if in

24   the particular reproduction mode (b) i) in the normal reproduction mode, specifying and

25   extracting, using the descrambling key identifiers, the first group of descrambling keys and

26 descrambling each portion of the scrambled content in the first group of scrambled content with

27 use of a corresponding one of the first group of descrambling keys thereby obtaining a first group

28 of content made of a plurality of portions of content, and ii) in the particular reproduction mode,

29 specifying and extracting, using the descrambling key identifiers, the second group of

30 descrambling keys and descrambling each portion of the scramble content in the second group of

31 scrambled content with use of a corresponding one of the second group of descrambling keys

32 thereby obtaining a second group of content made of a plurality of portions of content; and

33   reproduction means for reproducing the first group of content in the normal

34 reproduction mode and reproducing the second group of content in the particular reproduction.

1   13.   (Previously Presented) The reception apparatus of Claim 12, wherein

2   the reception means sequentially receives a TS packet including (a) the

3   predetermined unit of scrambled content, and (b) auxiliary information including a descrambling

4   key and information for associating the descrambling key with scrambled content,

5   the storage means sequentially stores the received TS packet, and

6   the list generation means generates the list of descrambling keys, based on the

7   auxiliary information.

1   14.   (Previously Presented) The reception apparatus of Claim 13, wherein

2   the TS packet includes an ECM, the auxiliary information being embedded in a

3   portion to be encoded in a main body of the ECM, and

4   the list generation means extracts the auxiliary information embedded in the

5   ECM, and generates the list of descrambling keys based on the auxiliary information.

1   15.   (Previously Presented) A broadcast apparatus which scrambles content and

2   broadcasts the scrambled content to a reception apparatus, the broadcast apparatus comprising:

3   acquisition means for acquiring content to be scrambled and a plurality of

4   descrambling keys;

5   scramble processing means for scrambling a predetermined unit of content out of

6   the acquired content so that the predetermined unit of scrambled content is descrambled using a

7   descrambling key different for each predetermined unit or each set of a plurality of

8   predetermined units;

9   attaching means for attaching auxiliary information to the predetermined unit of

10   scrambled content, the auxiliary information consisting of (a) information for identifying the

11   scrambled content and (b) a descrambling key corresponding to the content, and used for having

12   the reception apparatus generate a list of descrambling keys including the descrambling keys and

13   descrambling key identifiers that identify the descrambling keys respectively and are used to

14   identify a descrambling key corresponding to the predetermined unit of scrambled content in

15   both a normal reproduction mode that includes a play mode, and a particular reproduction mode

16   that includes a fast-forward mode,

17   from the list of descrambling keys, a first group of descrambling keys being

18   extracted in the normal reproduction mode, and a second group of descrambling keys being

19   extracted in the particular reproduction mode; and

20   broadcast means for broadcasting the scrambled content to which the auxiliary

21   information is added.

16.   (Original) The broadcast apparatus of Claim 15, wherein

the attaching means embeds the auxiliary information in a portion to be encoded in a main body of an ECM and attaches the ECM to the predetermined unit of scrambled content.

17.   (Previously Presented) A broadcast apparatus which scrambles content and broadcasts the scrambled content to a reception apparatus, the broadcast apparatus comprising:

acquisition means for acquiring content to be scrambled and a plurality of descrambling keys;

list generation means for generating a list of descrambling keys including the descrambling keys and descrambling key identifiers that identify the descrambling keys respectively and are used to identify a descrambling key corresponding to the predetermined unit of scrambled content in both a normal reproduction mode that includes a play mode, and a particular reproduction mode that includes a fast-forward mode,

from the list of descrambling keys, a first group of descrambling keys being extracted in the normal reproduction mode, and a second group of descrambling keys being extracted in the particular reproduction mode;

embedding means for embedding the list of descrambling keys in at least one piece of predetermined information to generate at least one piece of storage information;

scramble processing means for scrambling a predetermined unit of content out of the acquired content so that the predetermined unit of scrambled content is descrambled using a descrambling key different for each predetermined unit or each set of a plurality of predetermined units; and

19   broadcast means for broadcasting the generated storage information and the

20   scrambled content.

1   18.   (Previously Presented) The broadcast apparatus of Claim 17, wherein

2   the embedding means embeds the list of descrambling keys in one piece of

3   predetermined information to generate one piece of storage information, and

4   the broadcasting means broadcasts the generated one piece of information and the

5   scrambled content.

1   19.   (Previously Presented) The broadcast apparatus of Claim 17, wherein

2   the embedding means embeds a divided portion of the list of descrambling keys in

3   each of a plurality of pieces of predetermined information to generate a plurality of pieces of

4   storage information, and

5   the broadcasting means broadcasts the generated plurality of pieces of storage

6   information and the scrambled content.

1   20.   (Previously Presented) The broadcast apparatus of Claim 17, wherein

2   the embedding means embeds the list of descrambling keys in a portion to be

3   encoded in a main body of at least one ECM to generate at least one piece of storage

4   information.

1   21.   (Original) The broadcast apparatus of Claim 17, wherein

2   the broadcast means broadcasts one set of the storage information while all the

3   scrambled content corresponding to the storage information are broadcast once.

1   22.   (Previously Presented) A program used for a reception apparatus which receives

2   and reproduces scrambled content, the program being stored on a computer-readable medium

3   and having the reception apparatus conduct the following steps of:

4   a reception step for receiving the scrambled content, wherein the scrambled

5   content is scrambled so that a predetermined unit of scrambled content, which is a portion of the

6   scrambled content, is descrambled using a descrambling key corresponding to the predetermined

7   unit of scrambled content, and at least one piece of storage information in which a list of

8   descrambling keys including all descrambling keys to be used for descrambling the scrambled

9   content and descrambling key identifiers that identify the descrambling keys respectively and are

10   used to identify a descrambling key corresponding to the predetermined unit of scrambled

11   content in both a normal reproduction mode that includes a play mode, and a particular

12   reproduction mode that includes a fast-forward mode is embedded,

13   from the list of descrambling keys, a first group of descrambling keys being

14   extracted in the normal reproduction mode, and a second group of descrambling keys being

15   extracted in the particular reproduction mode;

16   a storage step for storing the received scrambled content and the storage

17   information;

18   a list extraction step for extracting the list of descrambling keys from the stored

19   storage information;

20   a descramble processing step for (a) extracting the predetermined unit of

21   scrambled content from the stored scrambled content sequentially if in the normal reproduction

22   mode to obtain a first group of scrambled content made of a plurality of portions of the

23   scrambled content, or to obtain a second group of scramble content made of a plurality of

24   portions of the scrambled content in an order different from the normal reproduction mode if in

25   the particular reproduction mode (b) i) in the normal reproduction mode, specifying and

26   extracting, using the descrambling key identifiers, the first group of descrambling keys and

27   descrambling each portion of the scrambled content in the first group of scrambled content with

28   use of a corresponding one of the first group of descrambling keys thereby obtaining a first group

29   of content made of a plurality of portions of content, and ii) in the particular reproduction mode,

30   specifying and extracting, using the descrambling key identifiers, the second group of

31   descrambling keys and descrambling each portion of the scramble content in the second group of

32   scrambled content with use of a corresponding one of the second group of descrambling keys

33   thereby obtaining a second group of content made of a plurality of portions of content; and

34   a reproduction step for reproducing the first group of content in the normal

35   reproduction mode and reproducing the second group of content in the particular reproduction

36   mode.

1   23.   (Previously Presented) A program used for a reception apparatus which receives

2   and reproduces scrambled content, the program being stored on a computer-readable medium

3   and having the reception apparatus conduct the following steps of:

4   a reception step for receiving the scrambled content, wherein the scrambled

5   content is scrambled so that a predetermined unit of scrambled content, which is a portion of the

6   scrambled content, is descrambled using a descrambling key corresponding to the predetermined

7   unit of scrambled content, and a descrambling key is attached to each predetermined unit of

8   scrambled content;

9   a storage step for storing the received scrambled content;

10   a list generation step for, when/after storing the received scrambled content in the

11   storage step, generating a list of descrambling keys including all descrambling keys to be used

12   for descrambling the scrambled content and descrambling key identifiers that identify the

13   descrambling keys respectively and are used to identify a descrambling key corresponding to the

14   predetermined unit of scrambled content in both a normal reproduction mode that includes a play

15   mode, and a particular reproduction mode that includes a fast-forward mode, based on the

16   descrambling key attached to each predetermined unit of scrambled content,

17   from the list of descrambling keys, a first group of descrambling keys being

18   extracted in the normal reproduction mode, and a second group of descrambling keys being

19   extracted in the particular reproduction mode;

20   a descramble processing step for (a) extracting the predetermined unit of

21   scrambled content from the stored scrambled content sequentially if in a normal reproduction

22   mode to obtain a first group of scrambled content made of a plurality of portions of the

23   scrambled content, or to obtain a second group of scramble content made of a plurality of

24   portions of the scrambled content in an order different from the normal reproduction mode if in a

25   particular reproduction mode (b) i) in the normal reproduction mode, specifying and extracting,

26   using the descrambling key identifiers, the first group of descrambling keys and descrambling

27   each portion of the scrambled content in the first group of scrambled content with use of a

28   corresponding one of the first group of descrambling keys thereby obtaining a first group of

29   content made of a plurality of portions of content, and ii) in the particular reproduction mode,

30   specifying and extracting, using the descrambling key identifiers, the second group of

31   descrambling keys and descrambling each portion of the scramble content in the second group of

32 the scrambled content with use of a corresponding one of the second group of descrambling keys

33 thereby obtaining a second group of content made of a plurality of portions of content; and

34 a reproduction step for reproducing the first group of content in the normal

35 reproduction mode and reproducing the second group of content in the particular reproduction

36 mode.

1 24. (Previously Presented) A program used for a broadcast apparatus which

2 scrambles content and broadcasts the scrambled content to a reception apparatus, the program

3 being stored on a computer-readable medium and having the broadcast apparatus conduct the

4 following steps of:

5 an acquisition step for acquiring content to be scrambled and a plurality of

6 descrambling keys;

7 a scramble processing step for scrambling a predetermined unit of content out of

8 the acquired content so that the predetermined unit of scrambled content is descrambled using a

9 descrambling key different for each predetermined unit or each set of a plurality of

10 predetermined units;

11 an attaching step for attaching auxiliary information to the predetermined unit of

12 scrambled content, the auxiliary information consisting of (a) information for identifying the

13 scrambled content and (b) a descrambling key corresponding to the content, and used for having

14 the reception apparatus generate a list of descrambling keys including the descrambling keys and

15 descrambling key identifiers that identify the descrambling keys respectively and are used to

16 identify a descrambling key corresponding to the predetermined unit of scrambled content in

17   both a normal reproduction mode that includes a play mode, and a particular reproduction mode;

18   and that includes a fast-forward mode,

19   from the list of descrambling keys, a first group of descrambling keys being

20   extracted in the normal reproduction mode, and a second group of descrambling keys being

21   extracted in the particular reproduction mode; and

22   a broadcast step for broadcasting the scrambled content to which the auxiliary

23   information is added.

1   25.   (Previously Presented) A program used for a broadcast apparatus which

2   scrambles content and broadcasts the scrambled content to a reception apparatus, the program

3   being stored on a computer-readable medium having the broadcast apparatus conduct the

4   following steps of:

5   an acquisition step for acquiring content to be scrambled and a plurality of

6   descrambling keys;

7   a list generation step for generating a list of descrambling keys including the

8   descrambling keys and descrambling key identifiers that identify the descrambling keys

9   respectively and are used to identify a descrambling key corresponding to the predetermined unit

10   of scrambled content in both a normal reproduction mode that includes a play mode, and a

11   particular reproduction mode that includes a fast-forward mode,

12   from the list of descrambling keys, a first group of descrambling keys being

13   extracted in the normal reproduction mode, and a second group of descrambling keys being

14   extracted in the particular reproduction mode;

15 an embedding step for embedding the list of descrambling keys in at least one

16 piece of predetermined information to generate at least one piece of storage information;

17 a scramble processing step for scrambling a predetermined unit of content out of

18 the acquired content so that the predetermined unit of scrambled content is descrambled using a

19 descrambling key different for each predetermined unit or each set of a plurality of

20 predetermined units; and

21 a broadcast step for broadcasting the generated storage information and the

22 scrambled content.

1 26. (Previously Presented) A computer-readable recording medium on which a

2 program used for a reception apparatus which receives and reproduces scrambled content is

3 recorded, the program has the reception apparatus conduct the following steps of:

4 a reception step for receiving the scrambled content, wherein the scrambled

5 content is scrambled so that a predetermined unit of scrambled content, which is a portion of the

6 scrambled content, is descrambled using a descrambling key corresponding to the predetermined

7 unit of scrambled content, and at least one piece of storage information in which a list of

8 descrambling keys including all descrambling keys to be used for descrambling the scrambled

9 content and descrambling key identifiers that identify the descrambling keys respectively and are

10 used to identify a descrambling key corresponding to the predetermined unit of scrambled

11 content in both a normal reproduction mode that includes a fast-forward mode, and a particular

12 reproduction mode that includes a fast-forward mode is embedded,

13   from the list of descrambling keys, a first group of descrambling keys being

14   extracted in the normal reproduction mode, and a second group of descrambling keys being

15   extracted in the particular reproduction mode;

16   a storage step for storing the received scrambled content and the storage

17   information;

18   a list extraction step for extracting the list of descrambling keys from the stored

19   storage information;

20   a descramble processing step for (a) extracting the predetermined unit of

21   scrambled content from the stored scrambled content sequentially if in the normal reproduction

22   mode to obtain a first group of scrambled content made of a plurality of portions of the

23   scrambled content, or to obtain a second group of scramble content made of a plurality of

24   portions of the scrambled content in an order different from the normal reproduction mode if in

25   the particular reproduction mode (b) i) in the normal reproduction mode, specifying and

26   extracting, using the descrambling key identifiers, the first group of descrambling keys and

27   descrambling each portion of the scrambled content in the first group of scrambled content with

28   use of a corresponding one of the first group of descrambling keys thereby obtaining a first group

29   of content made of a plurality of portions of content, and ii) in the particular reproduction mode,

30   specifying and extracting, using the descrambling key identifiers, the second group of

31   descrambling keys and descrambling each portion of the scramble content in the second group of

32   scrambled content with use of a corresponding one of the second group of descrambling keys

33   thereby obtaining a second group of content made of a plurality of portions of content; and

34   a reproduction step for reproducing the first group of content in the normal

35   reproduction mode and reproducing the second group of content in the particular reproduction

36   mode.

1   27.   (Previously Presented) A computer-readable recording medium on which a

2   program used for a reception apparatus which receives and reproduces scrambled content is

3   recorded, the program has the reception apparatus conduct the following steps of:

4   a reception step for receiving the scrambled content, wherein the scrambled

5   content is scrambled so that a predetermined unit of scrambled content, which is a portion of the

6   scrambled content, is descrambled using a descrambling key corresponding to the predetermined

7   unit of scrambled content, and a descrambling key is attached to each predetermined unit of

8   scrambled content;

9   a storage step for storing the received scrambled content;

10   a list generation step for, when / after storing the received scrambled content in

11   the storage step, generating a list including all descrambling keys to be used for descrambling the

12   scrambled content and descrambling key identifiers that identify the descrambling keys

13   respectively and are used to identify a descrambling key corresponding to the predetermined unit

14   of scrambled content in both a normal reproduction mode that includes a play mode, and a

15   particular reproduction mode that includes a fast-forward mode, based on the descrambling key

16   attached to each predetermined unit of scrambled content,

17   from the list of descrambling keys, a first group of descrambling keys being

18   extracted in the normal reproduction mode, and a second group of descrambling keys being

19   extracted in the particular reproduction mode;

20   a descramble processing step for (a) extracting the predetermined unit of

21   scrambled content from the stored scrambled content sequentially if in the normal reproduction

22   mode to obtain a first group of scrambled content made of a plurality of portions of the

23   scrambled content or to obtain a second group of scramble content made of a plurality of

24   portions of the scrambled content, or in an order different from the normal reproduction mode if

25   in the particular reproduction mode (b) i) in the normal reproduction mode, specifying and

26   extracting, using the descrambling key identifiers, the first group of descrambling keys and

27   descrambling each portion of the scrambled content in the first group of scrambled content with

28   use of a corresponding one of the first group of descrambling keys thereby obtaining a first group

29   of content made of a plurality of portions of content, and ii) in the particular reproduction mode,

30   specifying and extracting, using the descrambling key identifiers, the second group of

31   descrambling keys and descrambling each portion of the scramble content in the second group of

32   scrambled content with use of a corresponding one of the second group of descrambling keys

33   thereby obtaining a second group of content made of a plurality of portions of content; and

34   a reproduction step for reproducing the first group of content in the normal

35   reproduction mode and reproducing the second group of content in the particular reproduction

36   mode.

1   28.   (Previously Presented) A computer-readable recording medium on which a

2   program used for a broadcast apparatus which scrambles content and broadcasts the content to a

3   reception apparatus is recorded, the program has the broadcast apparatus conduct the following

4   steps of:

5   an acquisition step for acquiring content to be scrambled and a plurality of

6 descrambling keys;

7   a scramble processing step for scrambling a predetermined unit of content out of

8 the acquired content so that the predetermined unit of scrambled content is descrambled using a

9 descrambling key different for each predetermined unit or each set of a plurality of

10 predetermined units;

11   an attaching step for attaching auxiliary information to the predetermined unit of

12 scrambled content, the auxiliary information consisting of (a) information for identifying the

13 scrambled content and (b) a descrambling key corresponding to the content, and used for having

14 the reception apparatus generate a list of descrambling keys including the descrambling keys and

15 descrambling key identifiers that identify the descrambling keys respectively and are used to

16 identify a descrambling key corresponding to the predetermined unit of scrambled content in

17 both a normal reproduction mode that includes a play mode, and a particular reproduction mode

18 that includes a fast-forward mode,

19   from the list of descrambling keys, a first group of descrambling keys being

20 extracted in the normal reproduction mode, and a second group of descrambling keys being

21 extracted in the particular reproduction mode; and

22   a broadcast step for broadcasting the scrambled content to which the auxiliary

23 information is added.

1 29. (Previously Presented) A computer-readable recording medium on which a

2 program used for a broadcast apparatus which scrambles content and broadcasts the content to a

3   reception apparatus is recorded, the program has the broadcast apparatus conduct the following

4   steps of:

5   an acquisition step for acquiring content to be scrambled and a plurality of

6   descrambling keys;

7   a list generation step for generating a list of descrambling keys including the

8   descrambling keys and descrambling key identifiers that identify the descrambling keys

9   respectively and are used to identify a descrambling key corresponding to the predetermined unit

10   of scrambled content in both a normal reproduction mode that includes a play mode, and a

11   particular reproduction mode that includes a fast-forward mode,

12   from the list of descrambling keys, a first group of descrambling keys being

13   extracted in the normal reproduction mode, and a second group of descrambling keys being

14   extracted in the particular reproduction mode;

15   an embedding step for embedding the list of descrambling keys in at least one

16   piece of predetermined information to generate at least one piece of storage information;

17   a scramble processing step for scrambling a predetermined unit of content out of

18   the acquired content so that the predetermined unit of scrambled content is descrambled using a

19   descrambling key different for each predetermined unit or each set of a plurality of

20   predetermined units; and

21   a broadcast step for broadcasting the generated storage information and the

22   scrambled content.

1   30.   (Previously Presented) A computer-readable recording medium on which content

2   to be broadcast to a reception apparatus is recorded, wherein the reception apparatus receives and

3 stores scrambled content, and descrambles and reproduces the stored scrambled content, the

4 content comprising:

5   scrambled content which is scrambled so that a predetermined unit of scrambled

6 content, which is a portion of the scrambled content, is descrambled using a descrambling key

7 corresponding to the predetermined unit of content, and

8   a storage ECM, wherein a list of descrambling keys including all descrambling

9 keys used for descrambling the scrambled content and descrambling key identifiers that identify

10 the descrambling keys respectively and are used to identify a descrambling key corresponding to

11 the predetermined unit of scrambled content in both a normal reproduction mode that includes a

12 play mode, and a particular reproduction mode that includes a fast-forward mode, is embedded in

13 a portion to be encoded in a main body of at least one ECM,

14   from the list of descrambling keys, a first group of descrambling keys being

15 extracted in the normal reproduction mode, and a second group of descrambling keys being

16 extracted in the particular reproduction mode.

1   31.   (Previously Presented) A method for receiving and reproducing scrambled

2 content, the method comprising the steps of:

3   a reception step for receiving the scrambled content, wherein the scrambled

4 content is scrambled so that a predetermined unit of scrambled content, which is a portion of the

5 scrambled content, is descrambled using a descrambling key corresponding to the predetermined

6 unit of scrambled content, and at least one piece of storage information in which a list of

7 descrambling keys including all descrambling keys to be used for descrambling the scrambled

8 content and descrambling key identifiers that identify the descrambling keys respectively and are

9   used to identify a descrambling key corresponding to the predetermined unit of scrambled

10   content in both a normal reproduction mode that includes a play mode, and a particular

11   reproduction mode is embedded that includes a fast-forward mode,

12   from the list of descrambling keys, a first group of descrambling keys being

13   extracted in the normal reproduction mode, and a second group of descrambling keys being

14   extracted in the particular reproduction mode;

15   a storage step for storing the received scrambled content and the storage

16   information;

17   a list extraction step for extracting the list of descrambling keys from the stored

18   storage information;

19   a descramble processing step for (a) extracting the predetermined unit of

20   scrambled content from the stored scrambled content sequentially if in the normal reproduction

21   mode to obtain a first group of scrambled content made of a plurality of portions of the

22   scrambled content, or to obtain a second group of scramble content made of a particularity of

23   portions of the scrambled content in an order different from the normal reproduction mode if in

24   the particular reproduction mode (b) i) in the normal reproduction mode, specifying and

25   extracting, using the descrambling key identifiers, the first group of descrambling keys and

26   descrambling each portion of the scrambled content in the first group of scrambled content with

27   use of a corresponding one of the first group of descrambling keys thereby obtaining a first group

28   of content made of a plurality of portions of content, and ii) in the particular reproduction mode,

29   specifying and extracting, using the descrambling key identifiers, the second group of

30   descrambling keys and descrambling each portion of the scramble content in the second group of

31 scrambled content with use of a corresponding one of the second group of descrambling keys

32 thereby obtaining a second group of content made of a plurality of portion of content; and

33 a reproduction step for reproducing the first group of content in the normal

34 reproduction mode and reproducing the second group of content in the particular reproduction

35 mode.

1   32.   (Previously Presented) A method for receiving and reproducing scrambled

2   content, the method comprising the steps of:

3   a reception step for receiving the scrambled content, wherein the scrambled

4   content is scrambled so that a predetermined unit of scrambled content, which is a portion of the

5   scrambled content, is descrambled using a descrambling key corresponding to the predetermined

6   unit of scrambled content, and a descrambling key is attached to each predetermined unit of

7   scrambled content;

8   a storage step for storing the received scrambled content;

9   a list generation step for, when/after storing the received scrambled content in the

10 storage step, generating a list of descrambling keys including all descrambling keys to be used

11 for descrambling the scrambled content and descrambling key identifiers that identify the

12 descrambling keys respectively and are used to identify a descrambling key corresponding to the

13 predetermined unit of scrambled content in both a normal reproduction mode that includes a play

14 mode, and a particular reproduction mode that includes a fast-forward mode, based on the

15 descrambling key attached to each predetermined unit of scrambled content;

16   from the list of descrambling keys, a first group of descrambling keys being

17 extracted in the normal reproduction mode, and a second group of descrambling keys being

18 extracted in the particular reproduction mode;

19   a descramble processing step for (a) extracting the predetermined unit of

20 scrambled content from the stored scrambled content sequentially if in the normal reproduction

21 mode to obtain a first group of scrambled content made of a plurality of portions of the

22 scrambled content, or to obtain a second group of scramble content made of a plurality of

23 portions of he scrambled content in an order different from the normal reproduction mode if in

24 the particular reproduction mode (b) i) in the normal reproduction mode, specifying and

25 extracting, using the descrambling key identifiers, the first group of descrambling keys and

26 descrambling each portion of the scrambled content in the first group of scrambled content with

27 use of a corresponding one of the first group of descrambling keys thereby obtaining a first group

28 of content made of a plurality of portions of content, and ii) in the particular reproduction mode,

29 specifying and extracting, using the descrambling key identifiers, the second group of

30 descrambling keys and descrambling each portion of the scramble content in the second group of

31 scrambled content with use of a corresponding one of the second group of descrambling keys

32 thereby obtaining a second group of content made of a plurality of portions of content; and

33   a reproduction step for reproducing the first group of content in the normal

34 reproduction mode and reproducing the second group of content in the particular reproduction

35 mode.

1   33.   (Previously Presented)   A method for scrambling content and broadcasting the

2 scrambled content to a reception apparatus, the method comprising the steps of:

3   an acquisition step for acquiring content to be scrambled and a plurality of

4   descrambling keys;

5   a scramble processing step for scrambling a predetermined unit of content out of

6   the acquired content so that the predetermined unit of scrambled content is descrambled using a

7   descrambling key different for each predetermined unit or each set of a plurality of

8   predetermined units;

9   an attaching step for attaching auxiliary information to the predetermined unit of

10   scrambled content, the auxiliary information consisting of (a) information for identifying the

11   scrambled content and (b) a descrambling key corresponding to the content, and used for having

12   the reception apparatus generate a list of descrambling keys including the descrambling keys and

13   descrambling key identifiers that identify the descrambling keys respectively and are used to

14   identify a descrambling key corresponding to the predetermined unit of scrambled content in

15   both a normal reproduction mode that includes a play mode, and a particular reproduction mode

16   that includes a fast-forward mode,

17   from the list of descrambling keys, a first group of descrambling keys being

18   extracted in the normal reproduction mode, and a second group of descrambling keys being

19   extracted in the particular reproduction mode;

20   a broadcast step for broadcasting the scrambled content to which the auxiliary

21   information is added.

1   34.   (Previously Presented)   A method for scrambling content and broadcasting the

2   scrambled content to a reception apparatus, the method comprising the steps of:

3   an acquisition step for acquiring content to be scrambled and a plurality of

4 descrambling keys;

5   a list generation step for generating a list of descrambling keys including the

6 descrambling keys and descrambling key identifiers that identify the descrambling keys

7 respectively and are used to identify a descrambling key corresponding to the predetermined unit

8 of scrambled content in both a normal reproduction mode that includes a play mode, and a

9 particular reproduction mode that includes a fast-forward mode,

10   from the list of descrambling keys, a first group of descrambling keys being

11 extracted in the normal reproduction mode, and a second group of descrambling keys being

12 extracted in the particular reproduction mode;

13   an embedding step for embedding the list of descrambling keys in at least one

14 piece of predetermined information to generate at least one piece of storage information;

15   a scramble processing step for scrambling a predetermined unit of content out of

16 the acquired content so that the predetermined unit of scrambled content is descrambled using a

17 descrambling key different for each predetermined unit or each set of a plurality of

18 predetermined units; and

19   a broadcast step for broadcasting the generated storage information and the

20 scrambled content.